Kennedy Space Center Roadmap

Goal 1.0 Assure that sound, safe, and efficient practices and processes are in place for privatized/commercialized launch site processing.

Establish a Presence (A) 1999-2002	Expand Our Horizon (B) 2003-2009	Develop the Frontier (C) 2010-2025
Objective 1.1A **Provide Safe, Reliable, Cost Effective Processing Of Shuttle and ELV Launches (Loren Shriver)** **Strategies** S1.1.1 A - Improve Safety And Reliability and Lower Cost of Shuttle Processing (L. Shriver) S1.1.1.1 A - Lead and support Shuttle Upgrades (J. Morgan) S1.1.1.2 A - Implement Shuttle processing and ground systems enhancements/upgrades (D. King) S1.1.1.3A - Privatize/Commercialize Shuttle (D. King) S1.1.2A - Improve safety and reliability and lower costs of launch site payload processing (S. Francois) S1.1.3 A - Ensure safety and reliability and lower costs of ELV service(B. Bruckner) S1.1.4 A - Develop and deploy new safety and mission assurance concepts (C. Fairey)	**Objective 1.1B** **Enable Safe, Low Cost Launches of Space Vehicles** **Strategies** S1.1.1B - Recognized leader in launch, landing and payload processing management expertise S1.1.1.1B - Evolve facilities to multi-program use S1.1.1.2B - Enable commercial success for shuttle and ELV S1.1.2B - Provide world leadership in safety and mission assurance concepts	**Objective 1.1C** **Enable Safe, Low Cost Launches of Space Vehicles** **Strategies** S1.1.1C - Recognized leader in launch processing and management expertise S1.1.2C - Provide world leadership in safety and mission assurance concepts
Objective 1.2A **Provide Safe, Reliable, Cost Effective Processing of ISS (Loren Shriver)** **Strategies** S1.2.1A – Assure ISS flight elements are adequately planned, processed, tested and verified from manufacturing through launch (T. Talone) S1.2.2A - Implement ISS processing and ground systems enhancements/upgrades (S. Francois) S1.2.3A - Develop and implement successful ISS logistics support (K. Payne) S.1.2.4A - Increase integration efficiency for experiments for ISS Partners, including International Partners (S. Bartell)	**Objective 1.2B** **Enable Safe, Reliable, Cost Effective Processing of ISS** **Strategies** S1.2.1B - Commercial utilization of ISS S1.2.1.1B - Transition to contractor S1.2.1.2B - Develop insight role S1.2.1.3B - Monitor performance S1.2.2B - Improve ISS processes, reduce cycle time S1.2.3B - Implement on-orbit logistical concepts for ISS	**Objective 1.2C** **Enable Safe, Reliable, Cost Effective Processing of ISS** **Strategies** S1.2.1C - Assure contractor operations for ISS logistical missions are safe, efficient, and effective

Goal 2.0 Increase the use of KSC's operational expertise to contribute to the design and development of new payloads and launch vehicles

Objective 2.1A
Perform Advanced Launch Systems Development, Test, and Implementation (Loren Shriver)

Strategies
S2.1.1A - Lower the life cycle cost of future vehicles (L. Shriver)
- S2.1.1.1A – Utilize and advance KSC capabilities and expertise for the launch and processing of future vehicles (L. Shriver)
- S2.1.1.2A – Partner with researchers and developers to design Future X vehicles (W. Wiley)
- S2.1.1.3A – Promote the use of X-34 as a testbed for shuttle upgrades technology and system development (J. Morgan)

S2.1.2A - Improve KSC's launch site capabilities for future vehicles (L. Shriver)
- S2.1.2.1A – Develop capability to fly technology test beds flights from KSC (W. Wiley)
- S2.1.2.2A – Enable the basing of RLV at KSC (W. Wiley)

Objective 2.2A
Perform Advanced Payload Processing Capability Development (Loren Shriver)

Strategies
S2.2.1A - Lower the life cycle cost of future payloads (L. Shriver)
- S2.2.1.1A – Reduce payload cycle time from design concept to launch (B. Bruckner)
- S2.2.1.2.A – Contribute to new payloads design and advanced planning (S. Bartell)
- S2.2.1.3A – Develop and implement payload processing and ground systems concepts/enhancements/upgrades (S. Bartell)

S2.2.2A - Provide payload carriers to meet future agency and customer requirements (B. Bruckner)

Objective 2.1B
Enable the Reduction of Transportation Costs to low-Earth Orbit by an Order of Magnitude ($10,000 to $1,000 per lb.)

Strategies
S2.1.1B - Develop innovative Magnum booster facilities & operations concepts

S2.1.2B - Perform research and development to reduce the cost of processing and launch of vehicles by an order of magnitude (e.g., advanced vehicle health monitoring systems, Smart GSE, and flexible test sets)

S2.1.3B - Utilize and advance KSC capabilities for the test, processing, and launch of future vehicles (e.g., trailblazer, pathfinder, spaceliner and military space plane)

Objective 2.2B
Provide Agency Leadership in Safe, Efficient Testing and Processing of Payloads

Strategies
S2.2.1B - Enhance carrier capabilities to meet new customer initiatives

S2.2.2B - Advance KSC capabilities for payload customers

S2.2.3B - Provide rapid cycle approach for new payload process from design concept to launch

S2.2.4B - Provide the capability to perform functional and interface operational check-out for ISS payloads

Objective 2.1C
Enable the Reduction of Transportation Costs to low-Earth Orbit by an Order of Magnitude ($1,000 to $100's per lb.)

Strategies
S2.1.1C - Test spaceliner

S2.1.2C - Utilize and advance KSC capabilities for the launch and processing of future vehicles

S2.1.3C - Perform research and development to reduce the cost of processing of vehicles by an order of magnitude

S2.1.4C - Provide highly adaptive and flexible launch environment to reduce the cost of launch

Objective 2.2C
Push the Technology Edge of Payload Testing and Processing

Strategies
S2.2.1C - Develop new processing technologies for new payloads

S2.2.2C - Advance KSC capabilities for payload customers

Goal 3.0 Utilize KSC operational expertise in partnership with other entities (Centers, industry, academia) to develop new technologies for future space initiatives.

Objective 3.1A
Explore and Define KSC Roles in Exploration (JoAnn Morgan)

Strategies
S3.1.1A - Identify and invest in new technologies where KSC expertise can be applied (J. Morgan)

S3.1.2A - Design, prototype and test concepts, capabilities and technologies to be applied to human and robotic exploration missions (S. Walker)

S3.1.3A – Perform operations and logistics assessments for exploration mission studies (J. Morgan)

Objective 3.1B
Provide Capability for Moon/Mars Initiatives

Strategies
S3.1.1B - Provide launch base environment to process, test, and launch the Moon/Mars mission

S3.1.2B - Follow up on partnership commitments to develop capabilities for Moon/Mars mission execution

S3.1.3B - Develop operations logistics concepts for Moon/Mars initiatives

Objective 3.1C
Assure KSC Provides a Significant Contribution to the Moon/Mars & Beyond Missions

Strategies
S3.1.1C - Develop techniques to support human missions for further solar system exploration

S3.1.2C - Partner design of space systems for travel to Mars & beyond

S3.1.3C - Provide long-term Moon/Mars operations logistics support

Objective 3.2A
Apply Operations Knowledge & Expertise to Future Technologies (Loren Shriver)

Strategies
S3.2.1A – Establish the spaceport technology center (L. Shriver)

S3.2.2A – Explore advanced range and other spaceport technology development initiatives (L. Shriver)

S3.2.3A - Explore partnerships to further develop Life Sciences in medical and environmental technology (I. Long)

S3.2.4A - Increase industry participation in NASA technology initiatives (S. Walker)

Objective 3.2B
KSC Operations Knowledge and Expertise is an Integral Part of Space Vehicle Design Process

Strategies
S3.2.1B - Partner with space transportation developers to provide unique KSC expertise for the design, assembly and checkout phases of flight hardware

Objective 3.2C
Apply KSC Operations Knowledge & Expertise to Beyond Earth Designs and Operations

Strategies
S3.2.1C - Provide/partner earth base operations, solutions and expertise to space based crew and mission management

S3.2.2C - Provide/partner advanced development for return facilities and capabilities for crew and samples

Goal 4.0 Continually enhance core capabilities (people, facilities, equipment and systems) to meet *NASA* objectives and customer needs for faster, better, cheaper development and operations of space systems

Objective 4.1A
Maximize customer satisfaction (Jim Jennings)

Strategies

S4.1.1A - Measure customer satisfaction to target further development and improvements (J. Jennings)
S4.1.2A - Improve internal customer relationships (R. Arbuthnot)
S4.1.3A - Increase public awareness, understanding, appreciation and support of KSC and NASA programs and goals (J. Gordon)

Objective 4.1B
Recognized as Most Customer Friendly Launch Center in World

Strategies

S4.1.1B - Further consolidate KSC, CCAS, PAFB & Eastern Test Range processes
S4.1.2B - Measure customer satisfaction to target further development and improvements

Objective 4.1C
Continue to Seize Opportunities to Improve & Expand Customer Relations

Strategies

S4.1.1C - Partner in managing Eastern Launch Site as a multi-purpose spaceport
S4.1.2C - Measure customer satisfaction to target further development and improvements

Objective 4.2A
Improve, Streamline, Enhance and Consolidate Core Capabilities (Loren Shriver)

Strategies

S4.2.1A - Define and implement KSC priorities for Center of Excellence efforts (L. Shriver)
S4.2.2A - Create new partnerships with other Centers, Agencies, and space faring entrepreneurs; as well as industry, state, and federal entities (J. Morgan)
S4.2.3A - Align the use of facilities and institutional resources to support KSC and Agency priorities (L. Shriver)
S4.2.4A - Increase industry/institution awareness of KSC capabilities through aggressive outreach (J. Morgan)
S4.2.5A - Further consolidate KSC, CCAS, PAFB & Eastern Range processes (E. Gormel)

Objective 4.2B
Recognized Leadership in Core Capabilities **Strategies**

S4.2.1B - Enthusiastically pursue assistance to space related operations or launches
S4.2.2B - Continually concentrate on maintaining core capabilities at the leading edge of technology

Objective 4.2C
Provide Core Capabilities to a Space-faring Customer Base

Strategies

S4.2.1C - Continually concentrate on maintaining core capabilities at the leading edge of technology

Objective 4.3A
Establish a Recognized National Leadership Position for Business Processes and Environmental Stewardship (Jim Jennings)

Strategies

S4.3.1A - Re-invent and re-engineer KSC's enabling and business processes to achieve a leadership position (J. Jennings)
S4.3.2A - Improve the safety of work practices (C. Fairey)
S4.3.3A - Champion aggressive continuous improvement (J. Jennings)
S4.3.4A - Improve our expertise and capabilities aligned with our core business and future state (R. Arbuthnot)
  S4.3.4.1A - Build effective future leadership for KSC (R. Arbuthnot)
  S4.3.4.2A - Provide education and continual learning opportunities to foster an adaptable, flexible expert workforce (R. Arbuthnot)
S4.3.5A - Lead the Agency's Occupational Health Program (W. Barry)
S4.3.6A – Improve the health of the KSC workforce (I. Long)

Objective 4.3B
Build on the Established Leadership Position to Remain World-Class

Strategies

S4.3.1B - Continue to measure customer satisfaction and benchmark to target further development and improvement of enabling functions

Objective 4.3C
Build on the Established Leadership Position to Become World-Class

Strategies

S4.3.1C - Continue to measure customer satisfaction and benchmark to target further development and improvement of enabling functions

Goal 4.0 Continually enhance core capabilities (people, facilities, equipment and systems) to meet *NASA* objectives and customer needs for faster, better, cheaper development and operations of space systems		
S4.3.7A - Provide environmental stewardship (I. Long) S4.3.7.1A - Provide cutting edge energy reduction techniques & practices (Jones) S4.3.7.2A - Reduce the usage of ozone depleting substances across the Center (M. Jones) S4.3.8A - Develop insight role supporting performance based contracts (J. Hattaway)		